

# Best Practices in State-Level Energy Efficiency

Maggie Molina, Program Director  
& Annie Gilleo, Senior Analyst  
Utilities, State, and Local Policy Program  
May 13, 2015  
Presentation to Delaware Energy Efficiency  
Advisory Council



# The American Council for an Energy-Efficient Economy (ACEEE)

- ACEEE is a 501(c)(3) nonprofit that acts as a catalyst to advance energy efficiency policies, programs, technologies, investments, & behaviors
- 50 staff; headquarters in Washington, D.C.
- Focus on end-use efficiency in industry, buildings, & transportation
- Other research in economic analysis; behavior; energy efficiency programs; national policy; utilities, state, & local policy
- Funding:
  - Foundation Grants (52%)
  - Contract Work & Gov't. Grants (20%)
  - Conferences & Publications (20%)
  - Contributions & Other (8%)

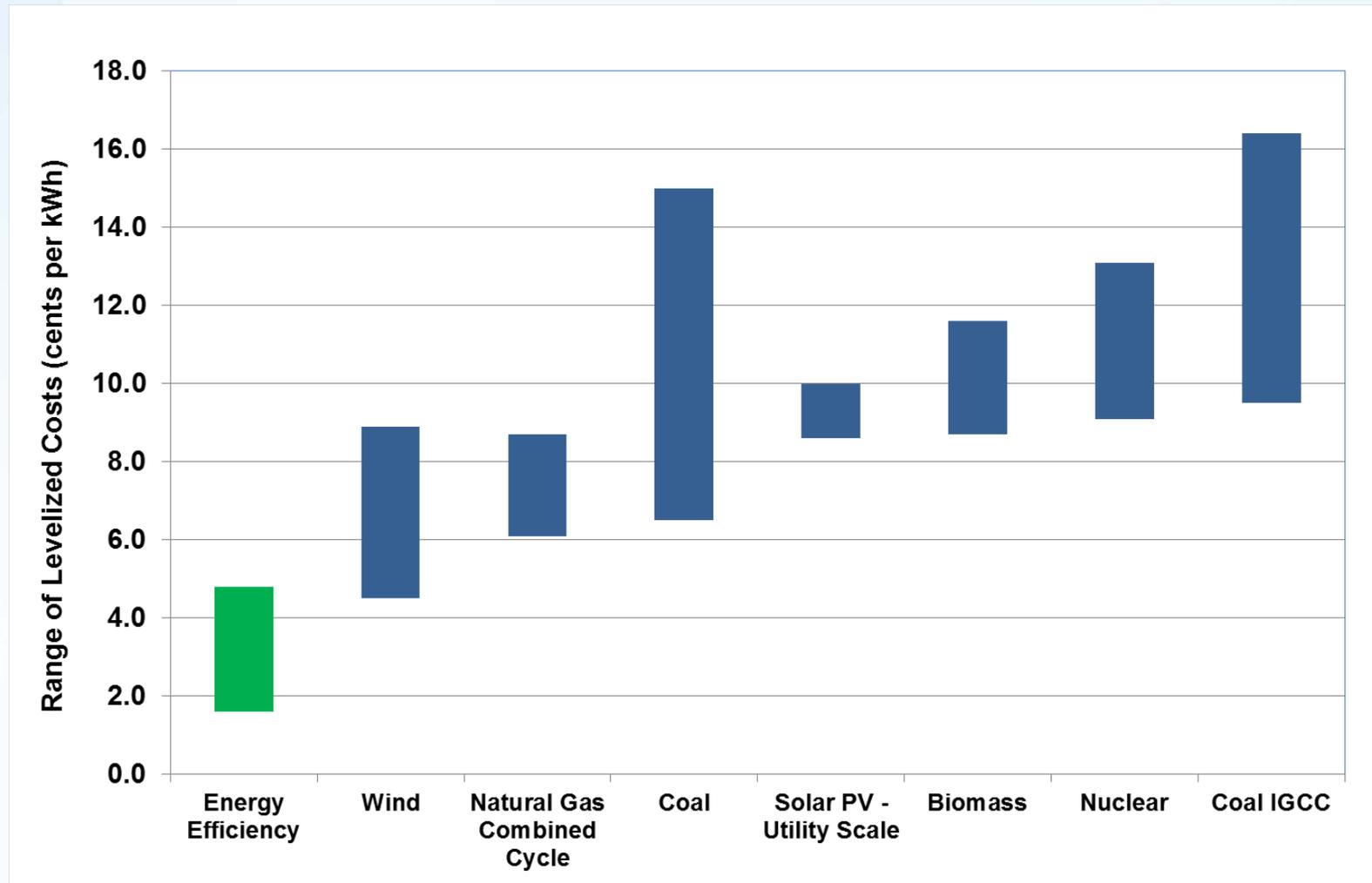


# Why Energy Efficiency?

- Lowers costs to all customers
- Lowers risks
- Reduces emissions
- Improves utility system reliability
- Improves customer satisfaction
- Promotes local economic development, energy affordability, and resilience
- Participant benefits: comfort, affordability, property values

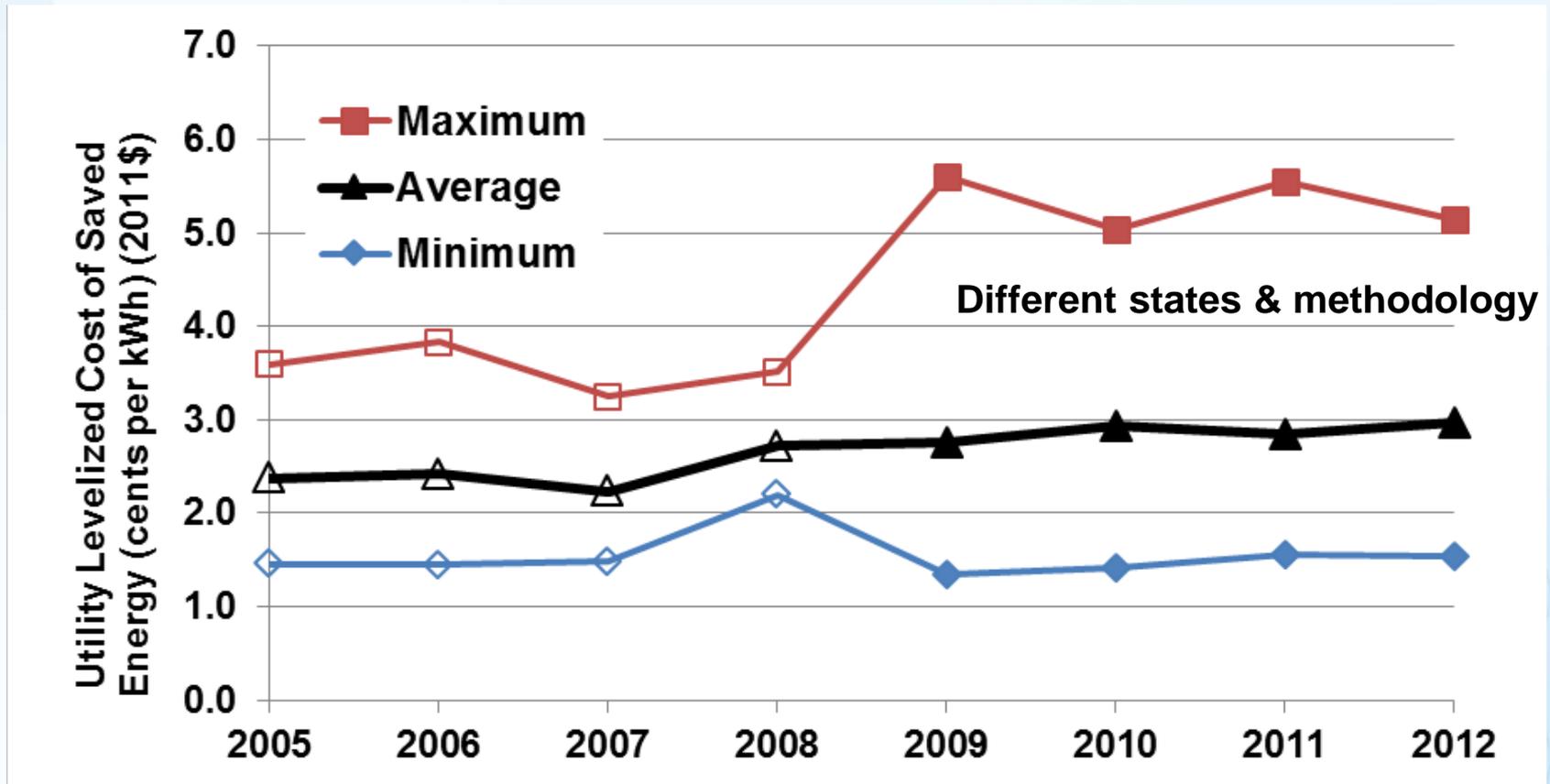


# Levelized Cost of Electricity



Source: The Best Value for America's Energy Dollar, ACEEE, 2014 and Lazard 2014

# Cost Trends by Year



# Electric Savings of Leading States

State	2013 net incremental savings (MWh)	% of retail sales
Rhode Island	161,831	2.09%
Massachusetts	1,116,442	2.05%
Vermont	99,074	1.78%
Arizona	1,317,329	1.74%
Hawaii	159,056	1.67%
Michigan	1,284,863	1.51%
Oregon	676,046	1.43%
Washington	990,143	1.35%
California	3,223,733*	1.25%

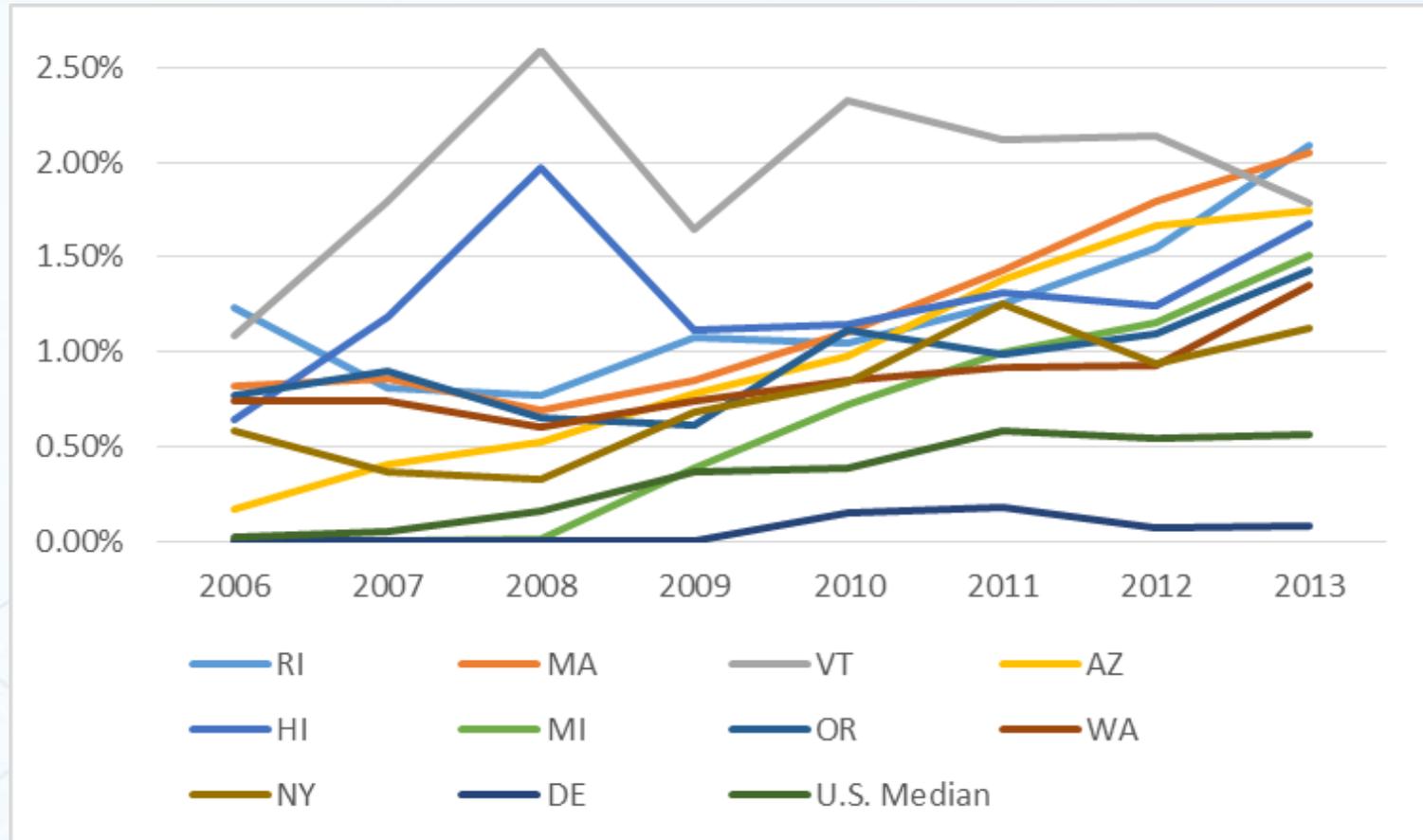
\* 2012 data; 2013 data wasn't available yet

# Sample of ramp-ups in recent years

Electricity Targets and Savings for Utilities Covered by EERS						
	2010	2011	2012	2013	2014	2015
Massachusetts						
Average Target	1.40%	2.00%	2.40%	2.50%	2.55%	2.60%
Achieved Savings	1.25%	1.68%	2.07%	2.40%		
Maryland						
Average Target	1.00%	1.25%	1.25%	1.65%	1.65%	1.65%
Achieved Savings	0.59%	0.66%	1.31%	1.65%		
Pennsylvania						
Average Target		1.00%	1.00%	1.00%	0.77%	0.77%
Achieved Savings	0.23%	1.00%	1.03%	0.97%		
Arkansas						
Average Target		0.25%	0.50%	0.75%	0.75%	0.90%
Achieved Savings	0.11%	0.23%	0.50%	0.90%		
Arizona						
Average Target*		1.25%	1.75%	2.00%	2.25%	2.25%
Achieved Savings	0.98%	1.38%	1.66%	1.74%		

\*Coops must achieve 75% of IOU targets

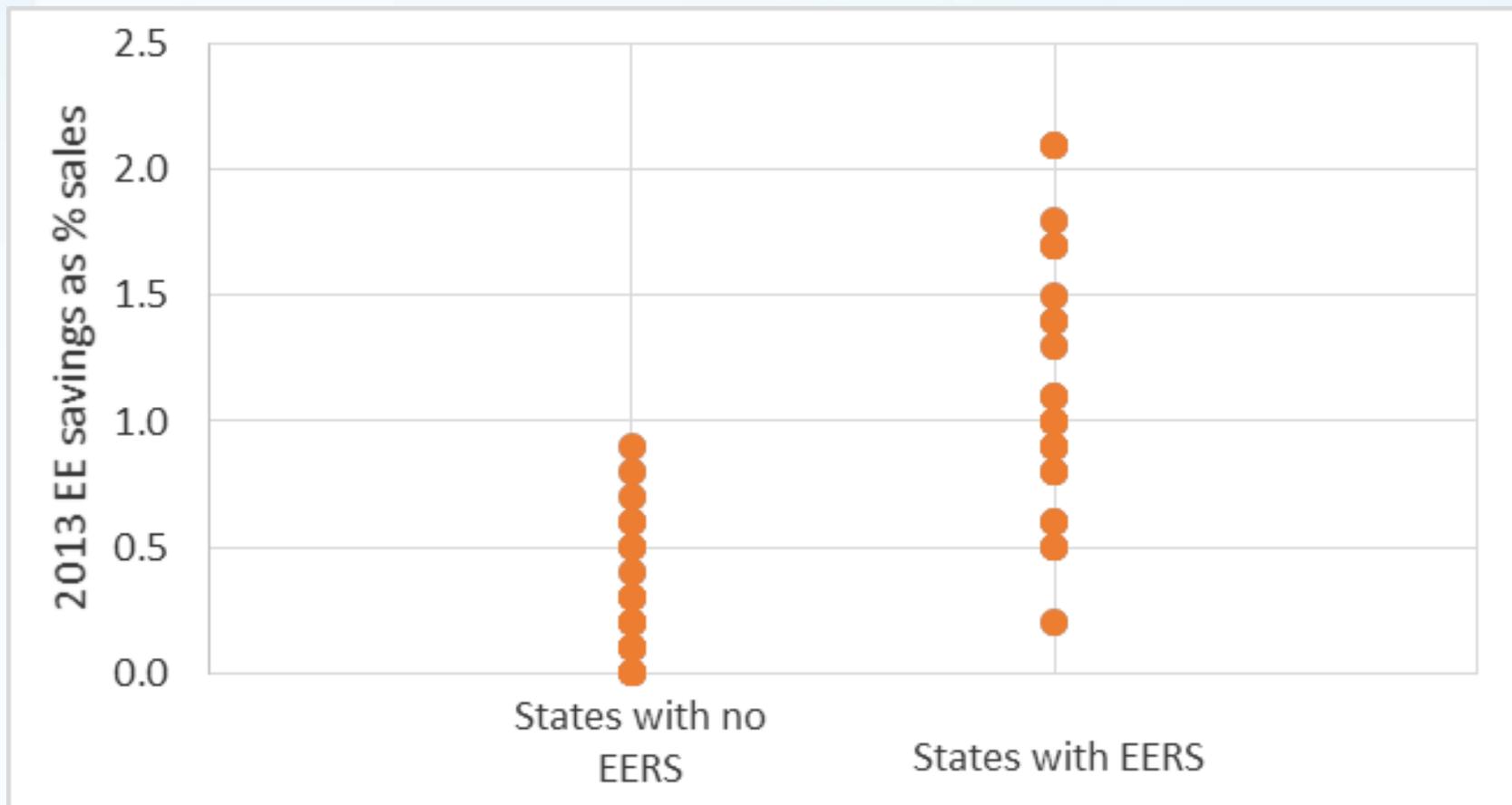
# States ramping up energy savings



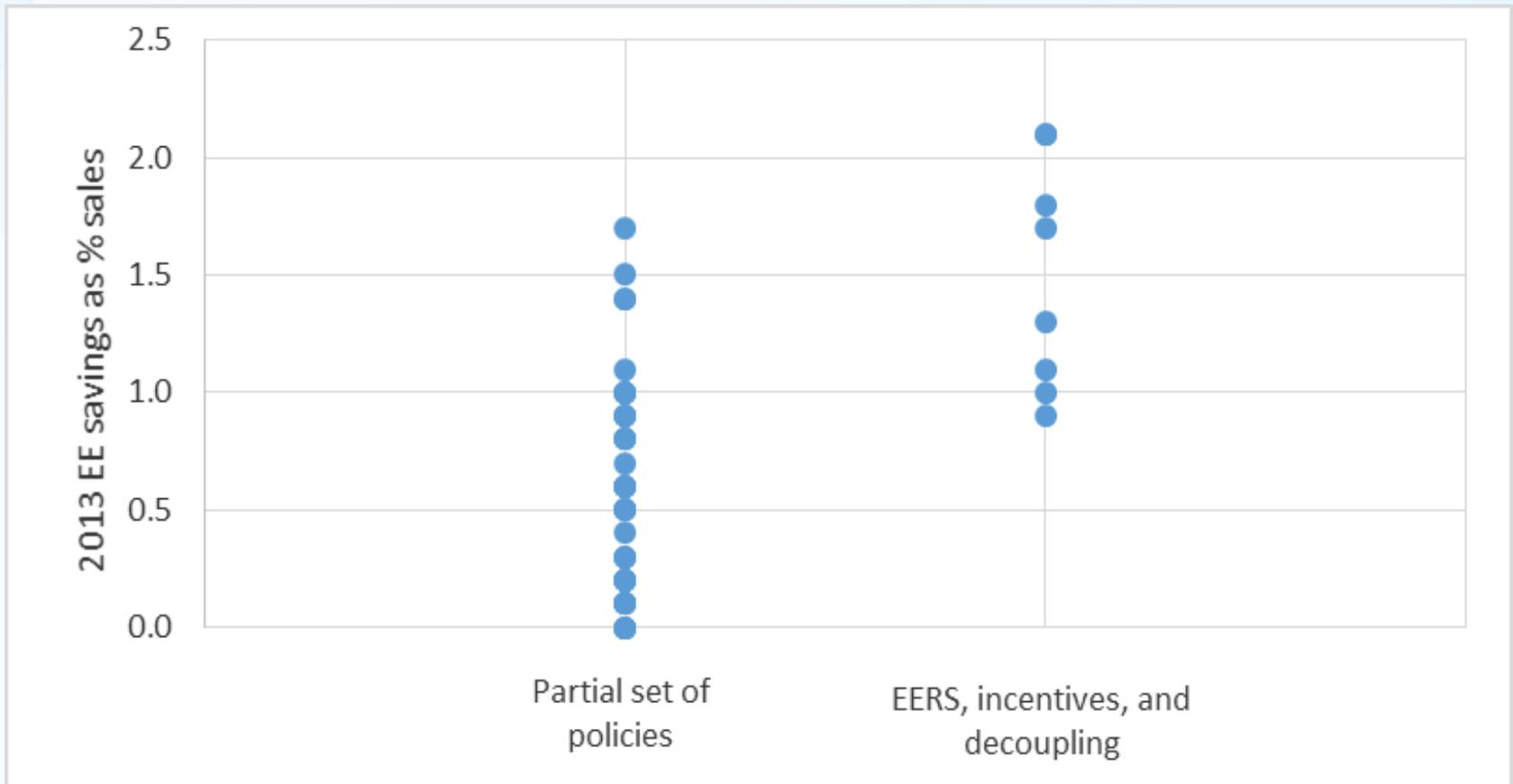
# Comprehensive Strategy to Scale up Energy Efficiency as a Resource

- Get the utility business model right:
  - Program cost recovery
  - Address throughput incentive, i.e. decoupling
  - Allow earnings opportunity, i.e. performance incentives
- Set specific EE targets that align with business model

# Electricity Savings in 2013: EE Targets



# Electricity Savings in 2013: EE Targets and Business Model Tools



# Current status of utility business model and EE targets

- Most states have program cost recovery
- 25 states with EE performance incentives (2 more pending); only 3 of these have penalties
- 12 states with electric decoupling; 14 states with lost revenue adjustment mechanisms
- 24 states with electric EE targets

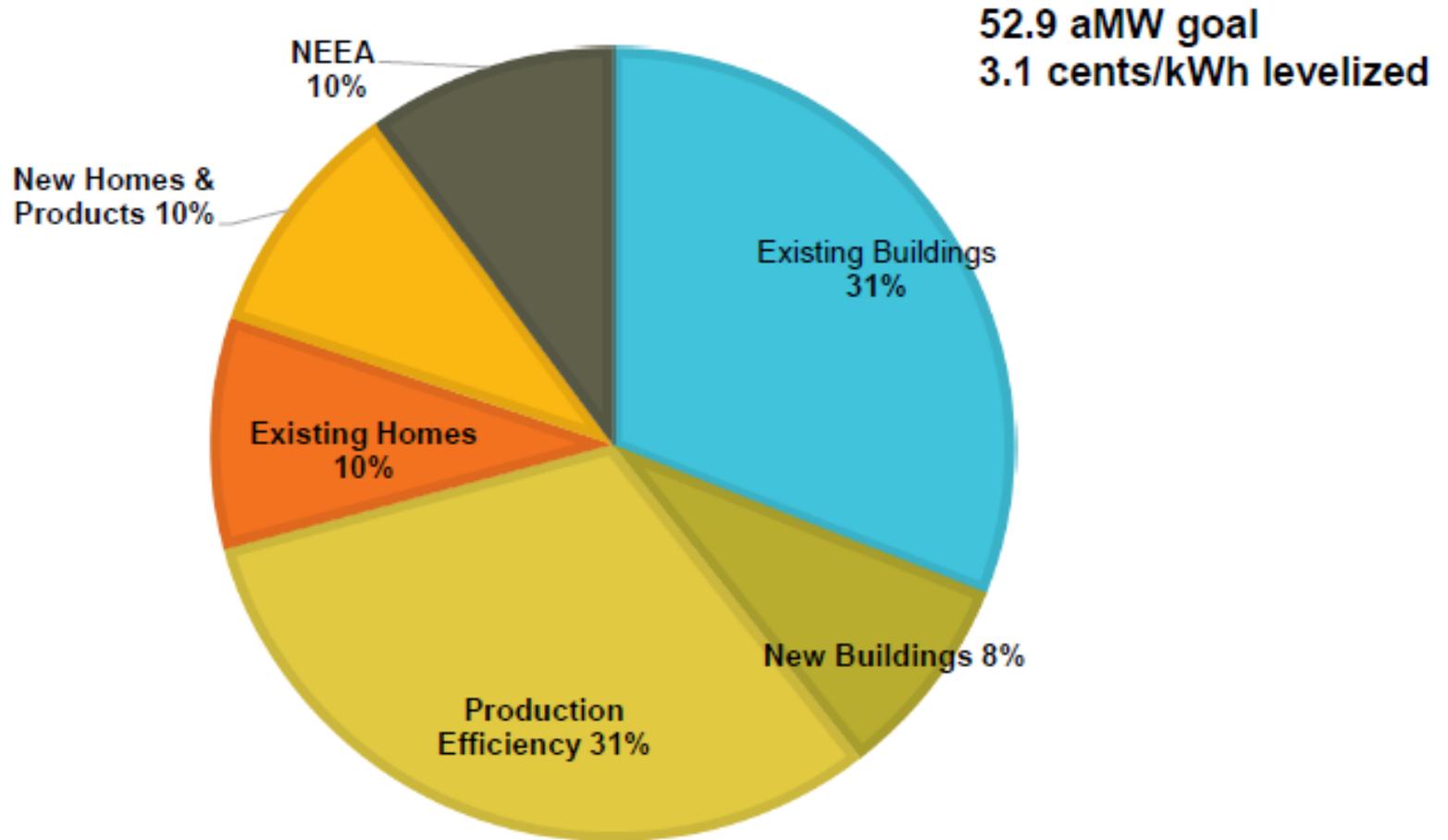
# **In addition to targets and utility business models...**

- Clear, stable, long-term regulatory support
- Proper cost-effectiveness test(s) for screening programs, EM&V practices
- Proper estimation of avoided costs
- Sound integrated resource planning practices
- Meaningful stakeholder engagement

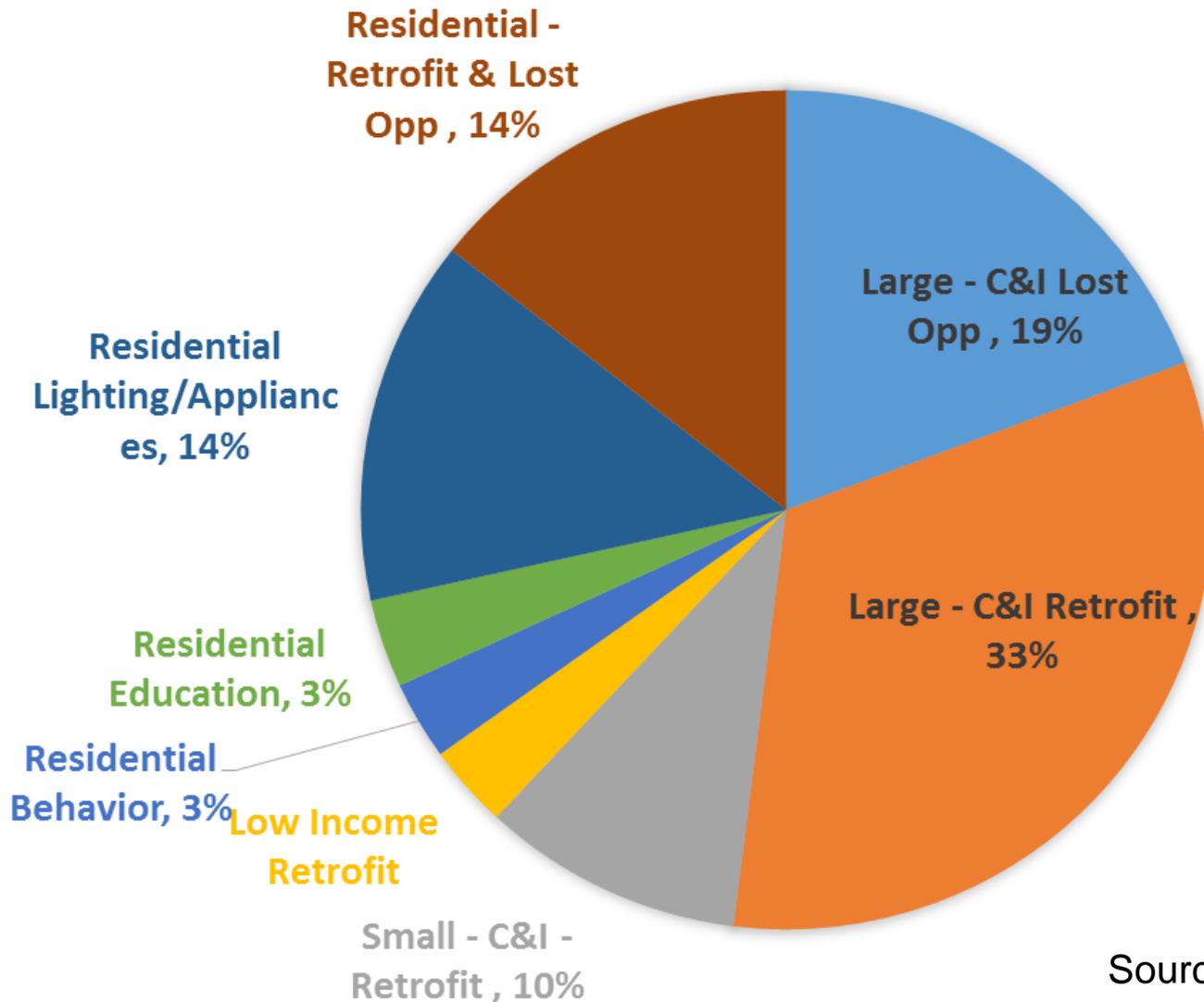
# Program Portfolio Best Practices

- Portfolio Diversity: across customer classes, and program strategies
- Emerging Technologies and Practices
- Participation Rates
- Consistency in marketing and program design
- Financing as a complementary strategy

# Energy Trust of Oregon: 2015 Proposed Electric Savings



# National Grid MA: 2011-2013 Electricity Savings

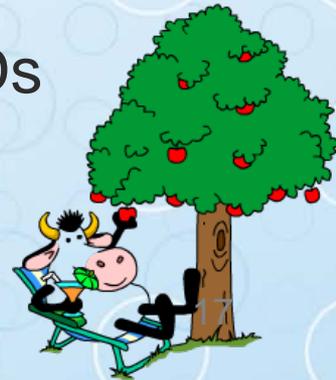


Source: REED Database

# ACEEE Next Big Things Study

(Summer 2015)

1. Appliances & standards (RF, CW, CD)
2. New construction programs & codes
3. Advanced lighting design & controls
4. Very efficient packaged AC for residential & commercial
5. Smart manufacturing and buildings
6. Strategic energy mgmnt for large C&I
7. Reduce key plug loads
8. Real-time feedback & advanced thermostats
9. Whole building retrofits
10. Combined heat & power
11. Conservation voltage reduction
12. Advanced water heaters
13. Residential LEDs
14. Industrial fans, pumps & compressors



# Program Spotlight: Help My House

**WHAT:** On-bill financing program with eight participating cooperatives in South Carolina

**HOW:** Whole-house approach

## **RESULTS:**

- Average home cut electricity use by 34%
- Average net savings of \$288 per year
- High degree of customer satisfaction (even among non-participants)

# ACEEE resources on EE Programs

- [Gamified Energy Efficiency Programs](#) Feb. 2015
- [Expanding the Pie: High Participation](#) Jan. 2015
- [Small to Medium-Sized Mfrs](#) Jan. 2014
- [Apartment Hunters](#) Dec. 2013
- [Intelligent Efficiency](#) Oct. 2013
- [Financing for Multi-Tenant Buildings](#) August 2013
- [Leaders of the Pack](#) June 2013
- [Next Generation Programs](#) Jan. 2013

# 2015 ACEEE SUMMER STUDY on ENERGY EFFICIENCY in INDUSTRY

Hyatt Regency Buffalo • Buffalo, NY • August 4 - 6, 2015

*Energy Efficiency: Integrating Technology, Policy and People*

## Panels:

- Strategic Energy Management
- Sustainability
- Smart Manufacturing
- Beyond Best Practices
- Policy and Resource Planning
- Delivering Results

## NEW! Networking Café

*This year's Summer Study kicks off with a Networking Café. Sponsored by the Northwest Industrial SEM Collaborative, the Café will provide an opportunity for attendees to share their thoughts about the emerging issues within industrial energy efficiency.*

*The conference ends with an "Open Space" informal session for people to convene on issues that emerged from presentations, papers, and the Café.*

# Thank you!

## Contact Information:

Maggie Molina

[mmolina@aceee.org](mailto:mmolina@aceee.org)

202-507-4004

Annie Gilleo

[agilleo@aceee.org](mailto:agilleo@aceee.org)

202-507-4002